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RECORD OF ORAL HEARING

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Appeal 2007-3177  
Application 10/014,977  
Technology Center 3700

Oral Hearing Held: Tuesday, June 17, 2008

Before DONALD E. ADAMS, RICHARD M. LEOVITZ, and  
JEFFREY N. FREDMAN, *Administrative Patent Judges*.

ON BEHALF OF THE APPELLANT:

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The above-entitled matter came on for hearing on Tuesday, June 17, 2008, commencing at 1:30 p.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, 9th Floor, Hearing Room A, Alexandria, Virginia, before Kevin E. Carr.



1 PROCEEDINGS

2 THE USHER: Good afternoon. We have calendar number 28, appeal  
3 number 2007-3177, David Randall, counsel for appellant.

4 MR. RANDALL: Good afternoon, Your Honors.

5 JUDGE ADAMS: You can either sit or stand at the podium.

6 MR. RANDALL: Okay. I have some slides. Do you mind if I  
7 present them to the board?

8 JUDGE ADAMS: Has the examiner seen them?

9 MR. RANDALL: He has not. Is the examiner here today?

10 JUDGE ADAMS: No. Then I would say no. And before you start  
11 I'd like to say good afternoon.

12 MR. RANDALL: Good afternoon.

13 JUDGE ADAMS: And that you'll have 20 minutes. We are familiar  
14 with your issues. And if you would begin by spelling your name into the  
15 record, I would appreciate it.

16 MR. RANDALL: Sure, let me just get my clock up here. My name is  
17 David Randall. That's R-a-n-d-a-l-l.

18 JUDGE ADAMS: I'm not sure we need it given the close proximity.  
19 But I'm not sure the mike is on.

20 THE USHER: Yes, it's on.

21 MR. RANDALL: Good afternoon, Your Honors. Today's appeal is  
22 from the examiner's final office action of May 19, 2005. That office action  
23 rejected all of the pending claims of United States Patent Application Serial  
24 Number 10/014,977 under 35 U.S.C. § 103a for being obvious over a



1 combination of at least three references, and in some instances five  
2 references.

3 As applicant demonstrated, the cited references do not teach  
4 individually or in combination that the claimed invention, nor is there a  
5 proper basis to combine the cited references. Accordingly, it is applicant's  
6 position that the rejections should be overruled and applicant's case be  
7 allowed to proceed to issue.

8 The present application relates to a method of analyzing components  
9 of alveolar breath. This is the breath that's deep in the lungs and that  
10 exchanges chemically with the blood so that concentrates of constituents  
11 within the alveolar breath are representative of concentrations in the blood.  
12 The invention measures two components, a first component to determine  
13 when alveolar breath is present, and a second component, which is the  
14 component of real interest, such as ammonia, water vapor, ammonia being  
15 reflective of renal dysfunction, as well as blood alcohol and things of that  
16 sort.

17 As shown in figure 3 of the patent application, breath is exhaled  
18 through an analyzing chamber and there are two detectors provided. The  
19 first detector detects the first component of interest, such as carbon dioxide.  
20 Once carbon dioxide reaches a threshold level, that activates the  
21 measurement of the second component, namely ammonia or some other  
22 component. The threshold in the invention at issue here is updated every  
23 time, based on the concentration of the first component in only the  
24 previously-measured breath.



1 JUDGE LEBOVITZ: Can I ask a question? Because claim 4 here,  
2 which depends upon claim 1, because I know you made that argument in the  
3 brief, and claim 1 says: "wherein, triggering via at least one concentration  
4 measurement of the second component includes triggering via at least one  
5 concentration measurement when the concentration of the first component  
6 crosses a threshold.

7 So 4 talks about a threshold but it doesn't talk about an adjustable  
8 threshold. That's the first time we talk about a threshold.

9 MR. RANDALL: Claim 1 says "triggering at least one concentration  
10 spectroscopic measurement on a second component of breath once the  
11 alveolar breath is in the analysis chamber." So to know when it's in the  
12 analysis chamber there can be a variety of ways, one of which is a threshold.  
13 Others, say in the patent, are in the concentration of plateaus. So there are  
14 multiple ways of doing it.

15 JUDGE LEBOVITZ: But it doesn't require changing the threshold, it  
16 just requires taking the second measurement when a certain concentration is  
17 achieved in the first breath.

18 MR. RANDALL: Or a certain profile is achieved in a certain breath,  
19 for example; but, however it's done, it can only be based on the immediately  
20 previous-expired breath.

21 JUDGE LEBOVITZ: But that could be constant. Couldn't it be, let's  
22 say, take a number 10 and whenever the first breath achieves 10, then in the  
23 second breath you measure the second component.

24 MR. RANDALL: I'm sorry. I'm not sure I understand your  
25 hypothetical. But if it's based on the concentration of a particular component



1 in the breath, the likelihood of one breath being exactly identical to a second  
2 breath is very remote. The human body is continuously changing.

3 JUDGE FREDMAN: Well, for example, if you have an alcoholic  
4 stopped by an officer and the alcoholic is then asked by the officer to breathe  
5 into the breathalyzer. And I've never had that experience. I don't know  
6 exactly what it's like, but I assume the person who breathes continues the  
7 multiple breath into the breathalyzer.

8 So if the first 4.5% concentration, which is also talking about prior art  
9 is reached, why would the machine then not be expected and continuously  
10 monitor the subsequent breath to get a more accurate analysis of the alcohol  
11 label, alcohol concentration.

12 MR. RANDALL: My I guess read of the claim is different from what  
13 you're suggesting currently, and that is that because the human body is  
14 dynamic the process can be improved by dynamically updating either a  
15 threshold or a profile, whatever it is that you are using to determine the  
16 presence of alveolar breath.

17 JUDGE FREDMAN: But as a matter of fact, in a way, your invention  
18 is almost less sufficient than the prior art, because the prior art is measuring  
19 it in the same breath. So there's the way the prior art does is as I understand  
20 Kiefer, I think that's right. Kiefer measures the concentration of carbon  
21 dioxide and sees a 4.5% level, and that triggers the measurement of the  
22 alcohol in the same expired breath.

23 But you're suggesting is as I understand it, looking at the breath 1, if I  
24 could call it breath 1, and then based upon that measurement looking at  
25 breath 2. For example, yes, part of I think what you're saying is right, but



1 I'm not sure that all of it is right. In other words, Kiefer is 4.5%. It is fixed  
2 at 4.5%, but never changes. It is hard-wired by the filament elements in the  
3 invention.

4 By contract, in the present invention, for example, say alveolar breath  
5 was detected at 3.5%. Then the threshold could be adjusted. If you were  
6 using a threshold and the threshold would be adjusted to 3.5 so that on the  
7 next breath the detection would be at 3.5.

8 JUDGE LEBOVITZ: Can you point to the language in the claim that  
9 would require it to be adjustable? I think that's the issue that we're all  
10 asking.

11 MR. RANDALL: Based on the concentration of the first component  
12 and only the immediately previous expired breath.

13 JUDGE ADAMS: So if I have an apparatus and I am going to use this  
14 apparatus to detect a concentration of alcohol in your system, I think the  
15 Kiefer reference would suggest that there is a threshold amount of carbon  
16 dioxide, the 4.5% that you need to reach in the breathalyzer apparatus before  
17 you trigger the measurement of blood alcohol. Is that correct?

18 MR. RANDALL: Correct.

19 JUDGE ADAMS: In claim 1 what excludes me from setting a static  
20 4.5% concentration for the first component?

21 MR. RANDALL: Because it wouldn't be based on.

22 JUDGE ADAMS: What wouldn't?



1 MR. RANDALL: The measurement of component 1 would not be  
2 based on the concentration of the first component and only the immediately  
3 previous-expired breath.

4 JUDGE FREDMAN: I expire into your apparatus. Your apparatus  
5 measures 4.5% carbon dioxide. That's the static threshold. I blow into your  
6 apparatus again and it takes a measurement of the second component. What  
7 is dynamically changing?

8 MR. RANDALL: I'm sorry. Can you repeat the question?

9 JUDGE FREDMAN: You statically affix the concentration of your  
10 threshold value for the first component at 4.5%. I expire into the system. It  
11 measures 4.5% carbon dioxide. I expire into your system again and it  
12 measures the second component. What is dynamically changing?

13 MR. RANDALL: The system has set, as I understand it, the  
14 concentration level, fixed at 4.5%, and so it is not based on anything other  
15 than your desire to fix it at 4.5%.

16 JUDGE FREDMAN: But it's not going to measure. In both cases,  
17 you don't get the second measurement until you get a first measurement of  
18 4.5%. So, in both cases, it's responsive to the first measurement. The thing  
19 is what it seems to be to some extent the invention is the account you are sort  
20 of doing this on the fly correlation, but that doesn't appear on the claim as far  
21 as I guess I'm not seeing it.

22 MR. RANDALL: I guess obviously this is a new issue in this  
23 instance.

24 JUDGE ADAMS: It's certainly not. It's a claim interpretation issue.  
25 It's not a new issue. It's a claim interpretation.



1           MR. RANDALL: Well, I guess it's an issue that hasn't been raised by  
2 the examiner or anybody else.

3           JUDGE ADAMS: I'm not sure about that, because the examiner is  
4 relying on the same references we are discussing and you approached us  
5 saying your claim 1 reads on a dynamic threshold value. And all three of us  
6 are questioning where exactly does your claim require this threshold value to  
7 be dynamically adjusted.

8           MR. RANDALL: Well, respectfully, sir, under the board's  
9 interpretation, one reference would potentially reach the claim, which is  
10 Kiefer. Clearly, the examiner said, "Kiefer doesn't teach." He said that  
11 "Culver doesn't teach it." And he relied on Culver because Culver taught  
12 dynamically changing a threshold based on four measurements, previous.

13          JUDGE FREDMAN: I think we are talking about Phillips instead of  
14 Culver. Is that right?

15          MR. RANDALL: I am referring to Culver, because the examiner  
16 withdrew Culver. You said the claims, including this language based on the  
17 concentration of the first component, and only the immediately previously-  
18 expired breath, the examiner during an examiner interview, which is  
19 attached in the evidence submitted with the appeal brief, that would  
20 distinguish over Culver, which Culver based its threshold on four prior  
21 measurements.

22          And so at that point, the examiner went out and found Phillips. So I  
23 guess I disagree with your interpretation that the examiner doesn't construe  
24 this language to impart a dynamic limitation, because that was the very issue  
25 that was being addressed when the language was added.



1 JUDGE LEBOVITZ: Well, I think the Examiner says on page 4,  
2 "The combination does not base the trigger threshold on previous  
3 measurements." Now, he uses the word "trigger threshold" to mean that you  
4 don't get a trigger in the prior art based on the previous breath. In the prior  
5 art it is true you're breathing into it, and when the CO<sup>2</sup> concentration reaches  
6 4.5, then in that same sample you measure the concentration say of alcohol.  
7 This plane differs, we agree, in that you're not measuring the concentration  
8 of alcohol in the same breath. When it reaches the 4.5 in the next breath,  
9 you then measure the alcohol.

10 And we are kind of puzzled why you would do that in the next breath,  
11 because that seems that it would be less accurate than measuring it in the  
12 same breath that has the 4.5 content in it.

13 MR. RANDALL: The board's interpretation is slightly off. You're  
14 not measuring 4.5% in the prior breath and measuring the concentration.  
15 What you're doing is measuring the first component in the first breath,  
16 determining what the threshold or profile should be and then setting the  
17 profile or threshold based on that measurement, so that if somebody's  
18 respiration rate goes up or somebody's breath changes, you can adapt the  
19 first component measurement to what it should be based on the real life  
20 breathing circumstances.

21 JUDGE FREDMAN: That doesn't really appear in their claim though  
22 does it?

23 JUDGE LEBOVITZ: Show it, yeah. Let's go to the claim, because  
24 we want to see where those words are.



1 JUDGE FREDMAN: It says, "one concentration spectroscopic  
2 measurement of the second component of the breath, once the alveolar  
3 breath is in the analysis chamber, based on the concentration of the first  
4 component, and it all the immediately and previous expired breath." I don't  
5 see that dynamic adoption that you are so positive about.

6 MR. RANDALL: If you go to the second element, "continuously  
7 monitoring a concentration of a first component of breath by measuring the  
8 light energy absorbed from the first component of breath is expired through  
9 the analysis chamber to determine when alveolar breath is in the analysis  
10 chamber."

11 Okay, so you're measuring it to determine when the alveolar breath is  
12 in the analysis chamber. But then you're triggering that once alveolar breath  
13 is in the analysis chamber, right? Triggering the second measurement once  
14 alveolar breath is in the analysis chamber, but that is based on the  
15 concentration of the first component in only the immediately previous  
16 breath.

17 JUDGE ADAMS: So you're saying that the second component, so if  
18 you breathe into this apparatus, this apparatus stores the breath. It measures.

19 MR. RANDALL: It doesn't actually store the breath. It just passes  
20 through it.

21 JUDGE ADAMS: So you noticed that the concentration of the first  
22 component is at a particular level, 4.5 percent. Is it the next breath that  
23 you're measuring, this second component, or is that same first breath?



1           MR. RANDALL: You would take the second breath, and if the  
2 second breath met the threshold or the profile that was established by the  
3 first breath, you would then measure the second component. In other words,  
4 say that based on the first breath you decided that alveolar breath was  
5 present at a concentration of 3.5. That would be your threshold for the  
6 second breath. The second breath would be exhaled through the device.  
7 That would be your threshold, if the thresholds met, then the concentration  
8 of the second component would be taken. If it is not met, there would be no  
9 measurement made.

10           JUDGE ADAMS: Okay. So in claim 6, which depends ultimately  
11 back to claim 1, we set a threshold concentration to be at least 4.5% relative  
12 concentration of the first component. So in this apparatus in claim 1, we  
13 have a set threshold of 4.5% that we need to meet for this first component.

14           MR. RANDALL: The device can be set so that the concentration has  
15 to be at 4.5 or above, but that it would still be dynamically changed.

16           JUDGE FREDMAN: Could it have changed to lower than 4.5?

17           MR. RANDALL: Yes, in claim 5, for example.

18           JUDGE FREDMAN: No. No, I'm saying after you set the threshold  
19 at 4.5% as in claim 6, you didn't lower it. That couldn't be a lower  
20 concentration. I appreciate that it could be lower. Could you dynamically  
21 lower it to be less than 4.5?

22           MR. RANDALL: My read of claim 6 would be that the threshold that  
23 would be set would at a minimum be 4.5%. In other words, if alveolar  
24 breath wasn't detected at 4.5%, either the device wouldn't set a concentration  
25 or it would set one at least 4.5%. It could be 5.5%. It could be 6.5%,



1 depending on the particular breathing patterns of the person being tested. So  
2 it isn't set at any specific number. Even in claim 6, that's simply a minimum.

3

4 JUDGE ADAMS: The best argument for your case on this record  
5 would be what?

6 MR. RANDALL: The best argument is that none of the combination  
7 of references teach all the limitations of the claim.

8 JUDGE ADAMS: Which one in particular? Because we have prior  
9 art that teaches expiring into an analysis chamber, monitoring the  
10 concentration of the first component, triggering once that concentration  
11 reaches a particular threshold value the measurement of a second  
12 component.

13 MR. RANDALL: Correct, but you do not have triggering at least one  
14 concentration measurement of the second component of the breath once the  
15 alveolar breath is in the analysis chamber based on the concentration of the  
16 first component and only immediately previous to the breath.

17 JUDGE ADAMS: That last additional clause is what you're  
18 suggesting the prior art does not talk about.

19 MR. RANDALL: That's exactly right, and the examiner has agreed.  
20 He has agreed explicitly on the record that Kiefer does not teach any of the  
21 claims taken alone. He has agreed that none of the references.

22 JUDGE FREDMAN: Kiefer refers to Forrester for the 102 as well.

23 MR. RANDALL: Pardon?

24 JUDGE FREDMAN: Kiefer wouldn't have been under 102 anyway,  
25 because he doesn't detect properly.



1           MR. RANDALL: And he also breathes on the record that Kiefer in  
2 combination with Forrester do not teach the claimed combination. He has  
3 explicitly stated that on the record.

4           JUDGE LEBOVITZ: But, so, the idea here would be what you're  
5 saying is that in step one you're measuring one component and some in the  
6 area under the curve and wonder for concentration. And when the area  
7 under the curve is compared to the previous breath, whatever was measured  
8 under the curve for that, you then trigger in some kind of relationship.  
9 Right? Triggering at least won't ruin it based on the concentration. It  
10 doesn't say. It doesn't have to be a direct correlation. It can be whatever you  
11 want it to be.

12          MR. RANDALL: It doesn't have to be a direct. If you look at the  
13 background of the patent there are a variety of ways that people have  
14 historically measured concentration of say indicator-like carbon dioxide to  
15 determine when alveolar breath was present. Some people do it by a fixed  
16 method. Some people measure both components, such as if you look at  
17 Forrester.

18          Forrester measures both components, both alcohol and the CO<sup>2</sup>  
19 throughout the whole exhale process and then determines whether alveolar  
20 breath is present and as a result you have a lot of extra data. The device has  
21 to have more memory, a variety of things. So if you're using say, a plateau  
22 method, to determine what's the proper concentration of CO<sup>2</sup> that should be  
23 set for determining when alveolar breath is present in a particular person.

24          If you use a current method, you have to collect data for both. You  
25 always have to collect data.



1 JUDGE FREDMAN: How do you address the Phillips reference  
2 which does seem to dynamically address breath at column 4? And, he  
3 clearly discusses updating initial respiration threshold levels because "altering  
4 said threshold levels-- I'm reading from in column 4, line 40 -- altering said  
5 threshold levels in an amount proportional to the initial respiration threshold  
6 level." So it seems like Phillips is discussing having initial and subsequent  
7 updated signals for respiration in the context where you want to measure  
8 different things.

9 MR. RANDALL: Phillips?

10 JUDGE FREDMAN: He's not doing the same thing. There's no  
11 question Phillips is not a breathalyzer.

12 MR. RANDALL: Phillips is not a breathalyzer.

13 JUDGE FREDMAN: But the question is the concept behind Phillips  
14 is that you can dynamically address that demonstration in it seems clear that  
15 Phillips could also be incorporated into Kiefer and Forrester.

16 MR. RANDALL: Phillips is directed to detecting a patient's  
17 respiration based on thoracic volume change. It doesn't have anything to do  
18 with breath or analyzing breath. Nor does Phillips teach triggering the  
19 measurement of anything based on a changing threshold and contrary to the  
20 examiner's position, Phillips does not teach a system in which a threshold is  
21 updated based on only the immediately previous patient measurement. That  
22 was what he relied on Phillips to basically show the language that we've  
23 been discussing.

24 And, if you look at Phillips, particularly the detector, the threshold  
25 detector in figure 2, the way that that threshold detector works is that there is



1 a filtered respiratory signal that's input to the detector at terminal 54. And  
2 that supplied to the amplifier one of the inputs of the amplifier 60. As a  
3 result of that the capacitor at 64 is charged to the highest value or the peak  
4 value in the filtered respiratory signal.

5 But because capacitor 64 is connected through resistor 66 and 68 to  
6 the ground, it will drain over time. Okay? That voltage on the capacitor,  
7 which is representative of the peak value of the voltage that was in this  
8 respiratory signal, it was also applied to the amplifier 7. And so it's actually  
9 a proportional signal, because you see that it is taken off between resistors  
10 66 and 68. And so what's going on is that there is a proportional signal as  
11 one input to reference 70, and then the other signal.

12 There is a proportional signal representative of a peak value in the  
13 respiratory signal that was applied at 54. Then as the other input to the  
14 amplifier 70, the raw data or the raw filtered respiratory signal is provided.  
15 So what happens, as described basically at column 7, lines 26 through 56,  
16 Phillips, it says, at amplifier 60 serves to isolate the anode of diode 62 from  
17 terminal 54, and also serves to minimize the voltage level at the cap of diode  
18 62 substantially equal to the voltage level on terminal 54.

19 Since amplifier 60 will adjust its output voltage to maintain the  
20 voltage levels at its two input terminals, substantially equal to one another,  
21 capacitor 64 by virtue of its connection to the cathode of diode 62 will  
22 therefore charge to the peak positive voltage level appearing at terminal 54.  
23 Resistors 66 and 68 will be charged from capacitor 64 to permit the voltage  
24 there across to decay in the absence of voltage at terminal 54, exceeding the  
25 voltage across capacitor 64.



1           So in other words, if the first signal comes in, it has a peak value, and  
2 charges up the capacitor. A second signal could come in and have a peak  
3 value below what the capacitor was charged, and will not again charge the  
4 capacitor until its peak voltage or subsequent signal of the peak voltage  
5 exceeds capacitor 64's voltage.

6           JUDGE ADAMS: So doesn't that create a dynamic threshold?

7           MR. RANDALL: It creates a threshold that could be updated based  
8 on the very present measurement. For example, if you have an incoming  
9 measurement, sets a new threshold because it has a peak.

10          JUDGE FREDMAN: And maybe more importantly, I think that the  
11 specific device does not necessarily always incorporate into the method of  
12 Kiefer and Forrester. It's where the concept that Phillips discusses of having  
13 a dynamic threshold. And I don't know that we're required to take the exact  
14 device and get the resistors together. I think we have to look at that  
15 conceptual underpinnings.

16          MR. RANDALL: Well, there's lots of things all over the place with  
17 dynamic updates, and I don't think the fact dynamic updates alone give you  
18 provide a basis for modifying Kiefer and Forrester in the manner in which  
19 they have to be modified here to arrive at the invention.

20          JUDGE FREDMAN: What is KSR 4 telling us? That common sense  
21 is in ordinary creativity of the ordinary practitioner's reason to combine?

22          MR. RANDALL: Well, the board has just told me that the better way  
23 to do it is by the very measurement, so we're going against the art here.

24          JUDGE ADAMS: If I can interrupt and back you up just a little bit,  
25 as you were explaining Phillips you said that there's a particular, you exhale,



1 and then a capacitor is charged. Right? And then nothing happens again  
2 until a subsequent breath. You reach a certain level where that capacity has  
3 been charged. Is that correct?

4 MR. RANDALL: I think the best thing to do is read Phillips. And it  
5 says here.

6 JUDGE ADAMS: You've read quite a bit of Phillips into the record,  
7 and I thought that was where you were going.

8 MR. RANDALL: There's one more section here, and if you could  
9 bear with me, this again is within the section, column 7 at 26 to 56. It says,  
10 "The non-inverting input terminal of amplifier 70 is connected to the second  
11 terminal of resistor 66 to receive a voltage there from proportional to the  
12 most recent peak value of the filter respiration signal to establish a threshold  
13 value. So in other words it could be the same respiration signal to establish  
14 a threshold value. It could be the previous one. It could be some number of  
15 previous ones.

16 JUDGE LEBOVITZ: You mean any peak? Is that what you're  
17 referring to?

18 MR. RANDALL: Any peak, but there's a component to it. If the peak  
19 isn't reset at some point, the capacitor will begin to decay because it is  
20 discharged or decayed through the resistors. So as its value becomes lower  
21 and lower, a new threshold will be set at some point if you continue to input  
22 respiratory signals reflective of the thoracic volume.

23 JUDGE ADAMS: One last question for you. Reading claim 6, you  
24 set your threshold to 4.5% relative concentration, so at a minimum before



1 you can trigger the measurement of the second component, you have to  
2 reach at least a minimum threshold of 4.5%. Is that correct?

3 MR. RANDALL: The threshold would have to be at a minimum  
4 4.5%.

5 JUDGE ADAMS: So using this method if the person is incapable of  
6 breathing into this apparatus and reaching a 4.5% minimum concentration of  
7 the first component, this method won't work. Is that right?

8 MR. RANDALL: It wouldn't work for that patient.

9 JUDGE ADAMS: We're running a little bit over. Is there anything  
10 else you'd like to add?

11 JUDGE LEBOVITZ: Can I ask one last question?

12 JUDGE ADAMS: Ask him.

13 JUDGE LEBOVITZ: You didn't bring this up with the Phillips  
14 reference, but one of the things, just looking through it right now, one of the  
15 reasons that we're adjusting the threshold level was for artifact purposes. Is  
16 that correct?

17 MR. RANDALL: Correct. Basically what Phillips is doing is  
18 adjusting. It's taking a measurement of the thoracic volume, and because  
19 there are organs such as the heart adjacent to the measurement that's being  
20 taken, the beating of the heart creates artifacts within the thoracic volume  
21 measurement. And so those measurements have to be filtered out. And so  
22 as you can see from the device shown in figure 1, basically, one input is the  
23 respiratory signal and one signal is the heart-rate signal. And that heart-rate  
24 signal is used as inputs into two filters to adjust those filters, basically to



1 remove the fundamental harmonic of the heart-rate and also multiple  
2 harmonics of that heart-rate.

3 JUDGE LEBOVITZ: So if the examiner says it would be obvious to  
4 apply Phillips to Kiefer, would one argument be that Phillips does concern  
5 itself with dynamic thresholds, but the reason for finding dynamic thresholds  
6 is to filter out new ways which changes during the course of measurement.  
7 Is that fair to say?

8 MR. RANDALL: That is fair to say. Phillips, as I think I previously  
9 indicated, does not measure a patient's breath in any way or any component  
10 of breath. Nor does it actually teach triggering a measurement based on  
11 anything.

12 JUDGE LEBOVITZ: Right. That part we understand, but the  
13 examiner seemed to be relying on it, not for a particular apparatus, nor for  
14 the particular application, but for the general concept of utilizing dynamic  
15 thresholds. And I guess I was raising the question why is Phillips concerns  
16 with dynamic thresholds, and at least in part, I haven't read the full  
17 reference, but in part it has to do with the change in noise levels due to the  
18 heart beating and whatever other systems are in the background.

19 It has to do with removing noise from the signals so they will  
20 get an accurate detection of whether somebody's breathing or not breathing  
21 as opposed to a false positive, perhaps based on a heartbeat.

22 JUDGE ADAMS: Okay. I think we're going to have to wrap it up in  
23 another minute if that's possible for you to do.

24 MR. RANDALL: Sure.

25 JUDGE ADAMS: We are way over at this point.



1           MR. RANDALL: I thank you for giving me the extra time. I think  
2 one of the last points to be made here is that Phillips is non-analogous art  
3 and thus cannot be combined with Kiefer, although under KSR it is no  
4 longer necessary to always identify no need or a problem as a motivation for  
5 modifying or combining the prior art. It is nevertheless always necessary  
6 that the prior art relied on to prove obviousness be analogous. As the board  
7 has held in Ex parte Prole, 2008 Westlaw 2321836, the Board of Patent  
8 Appeals and Interferences 2008, here Phillips is not analogous art, because it  
9 is not from the field of measuring alveolar breath components and is not  
10 reasonably pertinent to the problem of how to determine the presence of  
11 alveolar breath. And both of those issues have to be met.

12           Is it from the same field or reasonably pertinent? And somebody is  
13 looking to measure alveolar breath is not going to go look at how to measure  
14 thoracic volumes. So applicant submits that it is not analogous art; and I  
15 think we've briefed the teaching away.

16           Thank you.

17           JUDGE ADAMS: Thank you very much.

18           If we can go off the record.

19           [The hearing was concluded at 2:05 p.m.]